

A camera-based document scanning system produces electronic versions of documents, based on a plurality of images of discrete portions of the documents. The system compares each pair of consecutive images and derives motion parameters that indicate the relative motion between each pair of consecutive images. The system utilizes the derived motion parameters to align and merge each image with respect to the previous images, thereby building a single, mosaic image of the document. In the illustrative embodiment, the motion parameters are derived by minimizing a sum of squared differences equation on a pixel-by-pixel basis.